SECTION 32 1216

ASPHALT PAVING

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LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM Civil POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within “stars” during editing.

Specification developed for ML-3 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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PART 1 GENERAL

1.1 SECTION INCLUDES

A. Treated Open-Graded Base Course

B. Plant-Mix Bituminous Pavement

C. Open graded Friction Course

D. Traffic Control Markings

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01 3300, Submittal Procedures:

1. Material certifications documenting compliance with the New Mexico Department of Transportation (NMDOT) Standard Specifications for Highway and Bridge Construction (SSHBC) and the NMDOT Supplemental Specification to the 2000 Edition of the Standard Specifications for Highway and Bridge Construction (Supplemental SSHBC). Guidance; NMDOT SSHBC book and Supplemental Specifications to the 2000 Edition are at http://nmshtd.state.nm.us/main.asp?secid=11183

2. Proposed design mix of each class of bituminous pavement.

3. Laboratory test reports for design mix for bituminous pavement. The mix design reports shall be less than one year old and be from the same source for the aggregate to be used for the project.

4. Detailed Quality Control Plan (QC/QA) to meet the requirements set forth in the respective Section of the NMDOT Standard Specifications for Highway and Bridge Construction (SSHBC).

5. Traffic analysis, vehicle loadings, and structural design.

6. Detailed plan for permanent traffic control markings and traffic informational signs.

1.3 QUALITY ASSURANCE

A. Perform work in accordance with the respective, noted Sections of the NMDOT Standard Specifications for Highway and Bridge Construction.

B. Supply the base course and prepare the subgrade in accordance with the NMDOT Supplemental SSHBC, Section 303, Base Course (QC/QA) and in accordance with LANL Standard Specification 31 2000, Earth Moving. Obtain materials from same source throughout project, unless approved otherwise by LANL Contract Administrator.

PART 2 PRODUCTS

2.1 MATERIALS

A. Provide treated open-graded base course conforming to NMDOT SSHBC, Section 311, Treated Open-Graded Base Course.

B. Provide plant mix bituminous pavement conforming to NMDOT Supplemental SSHBC, Section 421, Plant-Mix Bituminous Pavement (Dense-Graded A, B, C, D: QC/QA) or Section 423, Plant-Mix Bituminous Pavement (Superpave QC/QA).

1. Section 421, plant-mix bituminous pavement: Provide aggregates conforming to the requirements of Grade A for a traffic loading of greater than 500,000 ESALs over 20 years. Provide aggregates conforming to the requirements of Grade B for a traffic loading of less than 500,000 ESALs over 20 years, unless approved otherwise by LANL Contract Administrator. Provide aggregates conforming to the requirements of Grade C for Pedestrian ≠ and Bicycle Paths and Parking Lots.

2. Section 423, plant-mix bituminous pavement: Provide aggregates conforming to the requirements of Table 423-A, as recommended by the laboratory mix design and approved by the LANL Contract Administrator.

3. Provide performance graded asphalt cement conforming to NMDOT Supplemental SSHBC, Section 402, Bituminous Material, Hydrated Lime, and Liquid Anti-stripping Agents.

C. Provide open-graded friction course conforming to NMDOT Supplemental SSHBC, Section 403, Open graded Friction Course (QC/QA).

1. Open-graded friction course: Provide aggregates conforming to the requirements of Type 1 or 2.

2. Provide asphalt cement conforming to NMDOT SSHBC, Section 402, Table 402-A, Bituminous Material, Hydrated Lime, and Liquid Anti-stripping Agents.

D. Provide liquid asphalt tack coat conforming to NMDOT Supplemental SSHBC, Section 407, Tack Coat.

E. Provide liquid asphalt prime coat conforming to NMDOT Supplemental SSHBC, Section 408, Prime Coat.

2.2 TRAFFIC CONTROL MARKING

A. Provide pavement markings and paint conforming to NMDOT SSHBC, Section 704, Pavement Markings. Comply with the requirements for the application, protection, and limitations of the paint or the inlaid retroreflective preformed plastic markings.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify compacted, treated base is ready to support paving and imposed loads.

B. Verify grades and elevations of base are correct.

3.2 PREPARATION

A. Remove loose material from compacted base surface immediately before applying prime coat.

B. Proof roll prepared subgrade surface to check for unstable areas and areas requiring additional compaction.

C. Do not place asphalt when base surface temperature is less than 40 degrees F.

D. Apply primer at the rate as recommended by the laboratory mix design and approved by the LANL Contract Administrator, over compacted subgrade. Apply material to penetrate and seal, but not flood, surface. Cure and dry as long as necessary to attain penetration and evaporation of volatiles.

E. Apply a tack coat to existing asphalt or portland cement concrete surfaces and to new surfaces abutting or projecting into asphalt pavement at the rate recommended by the laboratory mix design and approved by the LANL Contract Administrator.

3.3 PLACING ASPHALT PAVEMENT

A. Place bituminous pavement mixture by means of a paving machine on prepared surface, spread, and strike-off. Thickness of the pavement lifts shall be as recommended by the laboratory mix design and approved by the LANL Contract Administrator. Place inaccessible and small areas by hand. Place each course to required grade, cross section, and compacted thickness, as shown on drawings.

B. Target temperature shall be as indicated in the laboratory mix design for bituminous pavement course or between 180 degrees F. and 260 degrees F. for open-graded friction course, unless approved otherwise by LANL Contract

Administrator. Compact pavement by rolling immediately after the bituminous mixture has been spread and struck-off. Hand compact areas inaccessible to rolling equipment. Compact pavement to density and method specified in the respective Section of the NMDOT SSHBC.

C. Construct joints between old and new pavements, or between successive days' work. Construction joints to have same texture, density, and smoothness as other sections of bituminous pavement course. Clean joint contact surfaces and apply tack coat. The location of cold joints in roadways shall be approved by the LANL Contract Administrator.

3.4 TOLERANCES

A. Pavement smoothness shall conform to the tolerances required by NMDOT SSHBC, Section 401, Pavement Smoothness Measurement.

3.5 CLEANING AND PROTECTION

A. Cleaning

1. After completion of paving operations, clean surfaces of excess or spilled asphalt material to the satisfaction of LANL Construction Inspector.

B. Protection

1. After final rolling, do not permit vehicular traffic on bituminous pavement until it has properly cooled and hardened.

2. Provide barricades and warning devices as required to protect pavement, employees, and the general public. Temporary traffic control devices shall meet the requirements of the Manual on Uniform Traffic Control Devices, latest Edition.

3.6 PAVEMENT MARKINGS

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Refer to Civil Standard Drawing ST-G2020-1 for parking lot pavement marking layout.
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A. Sweep and clean surfaces to eliminate loose material, dirt, and debris.

B. Perform detailed layout of the pavement markings as shown on the approved detail plan.

C. Paint-markings and placement of inlaid retroreflective preformed plastic markings shall be as shown on the Drawings.

D. Apply three (3) coats of paint or one application of inlaid retroreflective preformed plastic markings. The second and third application of paint shall be placed no sooner the 14 days after the first application.

E. Apply paint with a spray-type self-propelled pavement marking machine to produce uniform straight edges.

F. Provide necessary measures to divert traffic from the installation area during the application and drying time of the permanent traffic control markings.

3.7 FIELD QUALITY CONTROL

A. Submit proposed mix design of each class of bituminous pavement to the LANL Contract Administrator for review and approval prior to commencement of Work.

B. Provide a certified independent testing agency to perform (QC/QA) to meet the requirements set forth in the respective Section of the NMDOT SSHBC.

C. Provide unobstructed access to work and cooperate with appointed testing laboratory.

END OF SECTION

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Do not delete the following reference information:
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FOR LANL USE ONLY

This project specification is based on LANL Master Specification 32 1216 Rev. 0, dated January 6, 2006.